What is claimed is:

1. Device for the production of a multi-layer concrete pipe, comprising:

a first stand;

a first drivable compacting tool mounted in said stand;

at least one turntable on which several mold mantles standing vertically can be pivoted into said stand in cycles;

a first charging system for filling a first concrete mixture into one of the mold mantles;

a second drivable compacting tool having an outside diameter that is smaller than an outside diameter of the first compacting tool; and

a second charging system for filling a second concrete mixture into one of the mold mantles.

2. Device according to claim 1, further comprising a second stand in which the second compacting tool is mounted so that said second compacting tool can be driven, said second stand being associated with said first stand so that said mold mantles can be pivoted into the second stand from the first stand by way of a turntable in cycles.

3. Device according to claim 2, wherein the first charging system is assigned to the first stand and the second charging system is assigned to the second stand.

4. Device according to claim 1, wherein the first and the second charging systems are assigned to the same stand, in which the first and the second compacting tool are also mounted.

5. Device according to claim 4, wherein at least one of the charging systems has a concrete silo with a filling belt assigned to it.

6. Device according to claim 4, wherein one of the charging systems has a concrete pump having a pump hose.

7. Device according to claim 4, wherein the first and the second compacting tool can be driven alternately in the stand, in cycles, by way of a quick-change device.

8. Device according to claim 4, wherein the second compacting tool is arranged below the first compacting tool on a common shaft.

9. Device according to claim 4, wherein the compacting tools are arranged on a hollow shaft which is assigned to at least one of the charging systems in such a manner that the concrete mixture is supplied to a location below the first compacting tool, through the hollow shaft.

10. Device according to claim 4, wherein the outside diameter of the compacting tool is radially adjustable.

11. Device according to claim 1, wherein the compacting tools each have a distributor having several distributor rollers that act essentially radially, and a compactor having several pressing rollers that act essentially radially, and a smoothing tool.

12. Device according to claim 1, wherein the compacting tools each have a distributor having several distributor rockers that act essentially radially, and a compactor having several compacting rockers that act essentially radially, and smoothing tools.

13. Device according to claim 11, wherein the distributor of each compacting tool rotates about a longitudinal axis of the mold mantle in a direction opposite the compactor, and at a different speed.

14. Device according to claim 1, wherein at least one of the compacting tools includes a spray head for distributing and compacting concrete mixtures, which is arranged above the smoothing tool.

15. Method for the production of a multi-layer concrete pipe, comprising the following steps:

pivoting a mold mantle, which stands essentially vertically on a turntable, into a first stand;

filling the mold mantle with a first concrete mixture by means of a first charging system;

distributing and compacting the concrete mixture in the mold mantle by means of a rotating and vertically displaceable first compacting tool;

pivoting the mold mantle, which stands essentially vertically on the turntable, out of the first stand and removing a a concrete pipe formed from the concrete mixture from the mold;

wherein before the concrete pipe is removed from the mold, a second concrete mixture is filled into the mold mantle, which essentially stands vertically, by means of a second charging system and wherein a second concrete mixture is distributed and compacted using a second compacting tool having a diameter that is smaller a diameter of the first compacting tool.

16. Method according to claim 15, wherein before the second concrete mixture is filled into the mold mantle and distributed and compacted in said mold mantle, the first compacting tool is exchanged for the second compacting tool, by way of a quick-change device in the first stand, and wherein after the second concrete mixture has been filled into the mold mantle and distributed and compacted, the second compacting tool is exchanged for the first compacting tool, by way of a quick-change device in the first stand.

17. Method according to claim 16, wherein the first concrete mixture from the first charging system is filled into the mold mantle above the first compacting tool, while at essentially the

same time, the second concrete mixture is supplied from the second charging system, above the second compacting tool, through the shaft on which the compacting tools are mounted.

18. Method according to claim 15, wherein before the second concrete mixture is filled into the mold mantle and distributed and compacted in said mold mantle, an outside diameter of the first compacting tool is reversibly reduced.

19. Method according to claim 15, wherein before the second concrete mixture is filled into the mold mantle and distributed and compacted in said mold mantle, the mold mantle on the turntable is pivoted out of the first stand and pivoted, standing essentially vertically, into a second stand.

20. Method according to claim 15, wherein before the second concrete mixture is filled into the mold mantle and distributed and compacted in it, the mold mantle on the turntable is transported from the first stand, essentially standing vertically, to a second stand, and is introduced on another turntable, into the second stand, before the first layer has cured.